



The effect of airborne particles and weather conditions on pediatric respiratory infections in Cordoba, Argentina

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Abstract:

We studied the effect of estimated PM(10) on respiratory infections in children from Cordoba, Argentina as well as the influence of weather factors, socio-economic conditions and education. We analyzed upper and lower respiratory infections and applied a time-series analysis with a quasi-Poisson distribution link function. To control for seasonally varying factors we fitted cubic smoothing splines of date. We also examined community-specific parameters and differences in susceptibility by sex. We found a significant association between particles and respiratory infections. This relationship was affected by mean temperature, atmospheric pressure and wind speed. These effects were stronger in fall, winter and spring for upper respiratory infections while for lower respiratory infections the association was significant only during spring. Low socio-economic conditions and low education levels increased the risk of respiratory infections. These findings add useful information to understand the influence of airborne particles on children health in developing countries.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Meteorological Factors, Meteorological Factors, Temperature

Air Pollution: Dust, Particulate Matter

Geographic Feature:

resource focuses on specific type of geography

Urban, Valley

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Central/South America

Health Impact:

Climate Change and Human Health Literature Portal



specification of health effect or disease related to climate change exposure

Respiratory Effect

Respiratory Effect: Other Respiratory Effect

Respiratory Condition (other) : upper and lower respiratory infections

Population of Concern: A focus of content

Population of Concern: 

populations at particular risk or vulnerability to climate change impacts

Children

Resource Type: 

format or standard characteristic of resource

Research Article

Timescale: 

time period studied

Time Scale Unspecified